1:Murphy and Quain E-4,5 (1938) 1955
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The rapid exhaustion of the soil forces them into a life which, although not nomadic, involves frequent moves. As the soil in old plots is exhausted, new ones have to be opened up. The area of exploitable land around the village is limited by the need to transport the produce and protect the villagers from their enemies. Thus, after the land available to the village has been used, the group moves.

The main subsistence of the nine village groups now living in the upper Xingú area is derived from this typically Amazonian shifting horticulture coupled with fishing in the extensive streams, lagoons, and estuaries. Apparently, the population of the region was never great enough to cause any pressure on land or other resources. Each village maintained exclusive rights of exploitation over certain waterways and areas of land within which the village always moved. There evidently were not, and still are not, any clearly defined territorial boundaries; but village rights are implicitly recognized.

The Neighbors of the Trumaí

Although there is considerable uniformity in the cultures of the upper Xingú tribes, their linguistic affiliations are diverse. The main language stocks of aboriginal Brazil are represented. On the Kuluene River are the linguistically independent Trumaí and the Cariban Kuikuru, Kalapalo, Tsuva, and Naravute. Near the waters of the Kuliseu River live the Tupian Kamayurá and Auetí, the Arawakan Mehinaku and Yaulapití, and the Cariban Nahukwa. The Batoví River is inhabited by the Arawakan Waurá and Kustenaú.[1] All these villages maintain a rather distrustful peace among themselves, but live in fear of their hostile Gê- and Tupian-speaking neighbors on the perimeters of the upper Xingú drainage area.

The upper Xingú "tribes" consist of one village each. It seems evident from the linguistic heterogeneity of the region that it is a *cul de sac* — one of the aboriginal refuge areas which characterize the cultural landscape of the headwaters of the Amazon and its tributaries.

The cultural uniformity of the above peoples has impressed all observers, as has the extensive contact that they maintain with each other. Descriptions of this homogeneity are to be found in von den Steinen[2] and, latterly, in Galvão[3] and Oberg.[4] Among the principal material traits which distinguish the area as opposed to neighboring, but outside, groups are: haystack-shaped houses arranged in a circle around a central plaza; bark canoes; dependence upon fish for protein;

[1] Oberg (1953, p. 4) states that the Yaulapití, Kustenaú, Tsuva, and Naravute no longer live in independent villages, but reside among other groups, usually of the same linguistic family.

[2] Von den Steinen 1886. [3] Galvão 1949. [4] Oberg 1953.

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The path which led from the village to Nariatan, the northwestern garden clearing, passed through the previously mentioned ceremonial clearing north of the village. A short distance beyond this point, a branch took off to the east and led to Waniwanitan, the northeastern and second largest clearing, which contained nine garden plots totaling approximately five acres. Each garden was tilled by a different man, but two men had plots in both Nariatan and Waniwanitan. The size of the average garden was one-half acre. There was no newly cleared land, and, in contrast to Nariatan which was still yielding, nearly all of the crop (mostly manioc) had either died or been harvested. Quain noticed that the soil in Nariatan had a gray tone, whereas that of Waniwanitan was reddish in hue. This difference in color was due to the ashes deposited by the more recent burning over of the former site.

Nariatan was a newer garden than Waniwanitan, and the former was planted to a variety of crops while the latter was nearly all in manioc. This is indicative of the common tropical forest slash and burn system whereby second year gardens are used only for manioc growing, and new areas in which the soil is still comparatively rich are used for other vegetables in addition to manioc. The Trumaí are unique, however, in that the garden clearing was divided into individually owned plots. Smaller individual gardens or large gardens cleared and cultivated collectively are the general rule in the rain forests of South America.

The three other clearings were small, and each contained one garden plot. One was one-quarter acre in size, while the other two each comprised one-half acre. These small gardens were connected with the village by separate paths and were closer to it than the two larger clearings. Anariatan, Nariatan and Waniwanitan were named after old village sites, but Quain knew of no abandoned locations from which the names Tan Toreake and Tandatake could have been derived.

Horticultural Techniques

It is difficult to assess the relative importance of horticulture, fishing and gathering in the subsistence economy of the Trumaí. At different times of the year each made the major contribution to the diet. Most garden products became available at about the middle of the rainy season, but manioc was dug up when needed throughout the year. Fish and manioc were staples the year-round, although fishing was poorer during the rains. Each was more important in the total diet than were the products of gathering. However, the subsistence of the Trumaí at certain times of the year, especially in the early part of the rainy season, would have been seriously threatened without the wild foods.

The agricultural cycle started in the early part of the dry season when the clearings needed for the next rainy season's gardens were made.

1:Murphy and Quain E-4,5 (1938) 1955
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Each man planted his garden without male assistance. However, when planting vegetables other than manioc, he was often aided by his wife or wives. During the whole Trumaí planting season Quain observed only one instance of cooperative labor in manioc planting. This occurred in the garden of Uluku, a Kamayurá, who had cleared a plot in the Trumaí gardens but had not returned in time to plant it. The work was initiated by the Trumaí chief, as this was an obligation of the village to an outsider. However, the men largely ignored his call and, of those who responded, most were co-residents of the chief.

Fishing Techniques

A variety of fish were caught and eaten by the Trumaí. The exact species were not recorded by Quain, but those in Oberg's partial list are also found in other tributaries of the Amazon.[1] A small fish called *kate* by the Trumaí was caught in great quantities during Quain's visit. Fish figured importantly in the diet throughout the year, but they were not as easily caught during the rainy season when the rivers overflowed into the adjacent forest. Fish were taken by hook and line, bow and arrow, poisoning, traps, nets and weirs.

Shooting with the bow and arrow was the most important single method. The fisherman stood in the bow of his bark canoe with bow and arrow poised while his helper paddled slowly in the stern. When a fish was sighted the arrow usually found its mark with surprising accuracy. Insofar as is known, only hooks and lines obtained from the whites by trade or gift were used. Quain found a great demand for them, and he gave many to the Trumaí and other groups.

Two kinds of poison were used to drug fish in the lagoons. The more important was made from the shredded bark of the *tawasi* tree and was effective only upon the small *kate* fish. The other was made from the ripe fruit of the *fit'a* tree, the bark of which was used in the washing of the body after ceremonial scarification.[2]

Fish traps were baited and set out in the lagoon. These were basket containers, long and rounded in shape. An open-ended basket cone, through which the fish swam, was set in the mouth. Once inside, the fish could not find their way out through the small end of the cone, which was pointed towards the inside of the trap. According to one informant, the Mehinaku could make fish traps, but not the Trumaí. Quain, however, found that at least three Trumaí men made traps,

[1] *Ibid.* pp. 25–26.

[2] The exact species of these trees are not known. Oberg (1953, pp. 26–27) refers to the use of *timbó* in a general sense only. *Timbó* commonly refers to the root of a small shrub and not to the above-mentioned drugs. Von den Steinen (1897) makes no reference to fish drugs.

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226 although not everyone owned one. Quain also described Trumaí fish nets, but netting must have been a minor technique, as he did not see it practiced during his stay.

[170] Throughout the upper Xingú area it was common practice to construct fish dams across the mouths of lagoons. There were two such fish weirs in the Trumaí lagoon, one near its mouth, the other across a small inlet near the village. Their purpose was to block the fish from escape to the main stream when drugs were placed in the water. They were built by driving upright stakes into the floor of the lagoon, after which a wall of rubbish and branches was built against the fence. One dam was constructed by the village cooperatively, while the other was said to have been built by a single man.

226 423 The Trumaí lagoon was considered the property of the community, and the Trumaí maintained exclusive fishing rights in it. The water in the lagoon is clear in comparison to the muddy Kuluene, and the fishing excellent. A good proportion of the fishing was done there, especially when traps and poisons were used, but they also had fishing rights in other lagoons within the territory of abandoned Trumaí villages. In addition, they fished in the Kuluene and Kuliseu and ranged as far afield as the Batoví River.

576 201 While most fishing trips were carried out within a day, some lasted two or three days. When the fishermen returned, they were greeted with a conventional shout by all the villagers. The shout was meant to welcome the food rather than the fishermen, and similar cries were heard when well laden gathering parties returned from a short jaunt into the forest.

501 422 226 About one-half of the men owned canoes, and according to Quain's informants, only six did not know how to build them. The bark canoes of the upper Xingú are not difficult to make, and it can be assumed that the community did not need more, inasmuch as fishing parties always consisted of two men. Larger groups went out of the village in a body when many fish were needed for a ceremony or to feed guests, but they usually split into pairs. Cooperative fishing groups of more than two men were needed only for drugging and perhaps for netting. On one *tawasi* fishing expedition over half the males of the village went to the lagoon with bundles of shredded bark. Quain noted that this was one of the few examples of group labor transcending the immediate family.

226 571 Two-man fishing expeditions were composed of the owner or borrower of the canoe and his helper (*tau*). The *tau* generally paddled while the owner fished. Only while serving as a helper was he referred to as the *tau* of that man. Thus, if a person went as the helper of Makurawa, he was referred to as "Makurawatau." He shared in the catch, but whether he received less than the canoe owner is not indicated by the field notes. There seemed to be no fixed standard for the selection of the *tau*, nor

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were the teams always the same. Old Matiwana and his son Yati fished together most of the time, as did Aloari and his true brother Tun. Other true brothers often fished together, but, with the exception of the two above-mentioned steadfast teams, men chose their fishing companions according to their mutual needs or plans for the day. Since such agreements occurred most often between members of the same household, co-residents often cooperated. One man, Jakuma, spent much of his time fishing as the *tau* of different canoe owners or borrowers. He had no wife, and his garden, which he did not till very diligently, was very small. His fishing partners included men from every household, who were related to him in various degrees.

Although the position of *tau* was a temporarily subordinate one, it caused no loss of status. Even the Trumaí chief, since he owned no canoe, went fishing as a *tau*. Occasionally men took their wives along, but fishing was a man's specialty, and the woman's function was restricted to paddling.

Gathering

The two most important food products that the Trumaí gathered were turtle eggs and the fruit of the *piquí* tree, or *tsinon*. Throughout the dry season, turtle eggs were gathered in great quantity on the banks and sandbars of the rivers. By September they were no longer available and, in the following month, *piquí* became the main objective of the gathering parties. The harvest of this fruit was stored and lasted nearly to the end of the rainy season. *Piquí* was an important staple, especially in the period before crops ripened. Most of the *piquí* trees grow wild, but there is a suggestion in Quain's notes that they might also have been transplanted when young. All of the *piquí* trees were individually owned, and proprietary rights of individuals to groups of trees were clearly understood by all. In order to make the fruit ripen fast, the owner of the trees built a slow-burning fire of grass underneath them at night. The early rainy season was a rather lean period, so that there was great joy when the *piquí* was heard falling in the forest. Everyone broke into shouts of "*kaha kaha kaha-a-a*," which was the conventional cry for greeting the first *piquí*. These shouts were slightly different from those welcoming fish brought into the village.

The first fruit was usually gathered by the owner of the trees and his family. However, when the fruit began to fall in great quantity there was a general harvest which was shared without regard for tree ownership.

Piquí gathering started in the middle of October, when the planting season had ended and the men were free to help in the gathering. However, men still fished frequently, and the burden of the gathering fell on the women and older boys. Women from the same household

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often gathered together, and at times all of the women of a house would work together in *piquí* collecting. Parties of boys and men sometimes picked up the fruit, and a man often went gathering with his wife to protect her from possible enemies, especially if there had been recent threats or omens. He took his bow and arrows, and frequently did not help in carrying the fruit back to the village. The *piquí* was brought to the village in basket containers, and then made into a variety of dishes.

Guava (*waruwaru*) grows wild in the forest, ripening a short time before *piquí* does, but extending into the season of the latter. Quain believed it to be a valuable vitamin C supplement to the diet, but it was a far less important food than *piquí*. Men participated little in guava collecting, although they accompanied their wives for sociability and protection. Quain described these connubial gathering expeditions as being largely pleasant jaunts through the wood. Children often went out for the fruit, which they brought back to the village strung on straws.

The water lily from which salt was made was another important item gathered during the period of Quain's residence among the Trumaí. The water lilies were collected in the Trumaí lagoon, and the complete salt-making process was carried on there. Each Trumaí built a rack over the waters of the lagoon. The lilies were pulled up, spread out on the rack to dry, and later burned. The ashes were sifted to obtain the salt. Quain did not mention any women's salt racks, but the women prepared their own supply of salt, too. Quain saw salt-making only in the early part of September, although it is possible that it occurred prior to this time as well. However, salt was not made after the middle of September, due to the rains and the exigencies of planting.

Ants were eaten by the Trumaí, and, according to an informant, by all groups in the area. A little boy demonstrated the correct way to consume them when he joyously brought in a fat one, plucked off its abdomen and swallowed it. Quain was told that later in the season the women and children would go out and collect them in large quantities. Other insects were in heavy demand for feeding the harpy eagle and other pet birds. Crickets were considered especially good for this purpose, and the boys made great sport of shooting these insects with their miniature bows and arrows.

A few other wild foods were eaten, but these were relatively insignificant. Among them was the fruit of the *awa'o* palm. Another fruit called *tamux*, resembling the crabapple in taste and superficial appearance, had a gelatinous interior. An unnamed plant is described by Quain as resembling grass, but having a quality like algae. It was eaten only in times of a manioc shortage. *Kamu'u* is a parasitic plant that looks and tastes like the date. The *atoh* is a berry that tastes like the chokecherry.

Fist'a and *tawasi*, the fish poisons, were gathered in the locale. The gathering and preparation of *tawasi* boughs was a cooperative venture.

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Older boys and men went into the forest to cut down the trees and bring the boughs back to the village. The men then took turns in pounding the boughs into coarse fiber with the blunt end of an axe. Even men who did not participate in the gathering of the boughs helped in their reduction into fiber.

The group nature of the work is understandable in view of the communal labor and benefits involved in fish poisoning. Once the boughs were reduced, the fibers were cut into sheaves of about two and one-half feet in length. These sheaves were used to poison the water. Interestingly, both bark and wood were pounded up together, although, according to Quain, only the bark is poisonous.

The *buriti* palm supplied two raw materials, *isinke* and *isinke hut'*. *Isinke* was obtained from the heart of the young spike of the growing tip of the palm. The top was separated to give access to the heart, and long fibers were pulled out, which were then hung in the interior of the house to dry. When dry they resembled a heavy hemp, and were used to make cord. *Isinke hut'* is the leaf of the *buriti*, which was used in basketry.

Hunting

Hunting was not important at any time during Quain's stay. Tapir, peccary, deer, monkey, jaguar, squirrel and paca, a large rodent, are among the animals mentioned by Quain as being found in the vicinity, but only the monkey and paca were eaten. Birds were also eaten, and their feathers were used for ornamentation. Terrapin were caught by hand, either by creeping up on them or by swimming close to them under water and grabbing them by the shell. All other game was shot with the bow and arrow, except for the capybara, called *tsimo* by the Trumaí. Canoeists speared the swimming animals. The spear was used at no other time in hunting or fishing, although the Yaulapiti speared fish.

Quain saw no organized hunting parties. One or two men sometimes set out with the express intention of hunting, but most animals were shot while on fishing or gathering expeditions. The Trumaí did not rely on meat, nor did they show a craving for it. Hunting seemed to be more a pastime and sport than a subsistence activity. When Quain hunted with the Trumaí he noticed that they wanted him to kill birds more for their feathers than for their meat. They also wanted him to kill several entirely worthless birds because, as two of the men expressed it, they wanted "to see it."

Foods

The horticulture, fishing and gathering economy of the Trumaí gave them a fair variety and adequate quantity of food during most of the year, barring crop failure. The Trumaí, however, had a considerably

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CHAPTER THREE

Trumaí Social Organization

Property Ownership

105 Trumaí society was relatively simple. There was no social stratification
[556] based on wealth, nor were the mechanisms of social control and
[626] cohesion highly developed. This was in accord with the individualization
[433] of productive effort and the low level of economic surplus. The political
[621] unit was a single community, the sole bearer of Trumaí culture.

All land and productive resources were considered the property of the
421 community, and the right to their exploitation resided with any indivi-
423 dual willing to expend the labor. Gardens were individual property, but only in the sense that the man who reclaimed the land from the jungle was entitled to its product. There was no concept of alienable property in land, entailing the right of disposition. The *piquí* trees were said to be owned individually, but the owner exercised exclusive rights only over the first fruits. Other wild food plants were community property
423 and their fruits belonged to the gatherer.

The fishing rights to lagoons and backwaters of the rivers belonged
[226] to the tribes in whose territory they were located. There was no indivi-
dual ownership of fishing sites.

422 There was property in foods, but as soon as they were cooked they
[263] were freely distributed. *Beijú* belonged to the women, but the manioc
out of which it was prepared was said to be the property of the man
[462] who grew it. Such distinctions were largely academic. Actually, the men grew the vegetable and the women harvested it, prepared it, and cooked it, after which it was distributed and eaten. The same situation prevailed in regard to the products of fishing, hunting, and gathering. Salt was
[263] the only exception, as it was prepared and owned by individual men
[834] and women. The difference undoubtedly lies in the fact that salt was an important trade item, while the other commodities were not.

Very little property can be said to have belonged to the family.
[285] Baskets and gourd containers were made by the men for themselves
[415] and for the women, but they were often used by both a man and his wife. Nearly all material objects outside of natural resources were owned by the person who made them or the person to whom an object was
423 given. House ownership was vague, since houses were built and occupied by more than one man, and abandoned when the village moved. The house, however, was often considered the property of the man who put

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tention of marriage. But an intention of marriage did not insure exclusive sexual rights. The man usually continued to get gratification wherever he could find it. The knowledge of his other liaisons did not particularly disturb his bride-to-be, as she herself may well have been receiving attentions from other lovers. After marriage, such transgressions were not so readily tolerated.

The chief obstacles in the way of the marriage-bent Trumaí swain were the necessity to shout down his rivals and gain the approval and consent of the girl's kinsmen. The woman's consent was not necessary in making the marriage, and she usually remained aloof, waiting to see who won. If, however, she was not pleased with the mate to whom she was awarded, she was free to leave him. And this she often did. While Quain was in the village, there were marriages that lasted only a day or two due to the bride's dissatisfaction.

In addition to the arguments that precede most marriages, the man was expected to go through certain formalities. He went to the girl's mother and stated his intentions. If the girl had no mother, he approached the nearest male relative. In order to gain the favor of her kinsmen, he distributed gifts, the most important to the girl's mother, others to her father, siblings, and her mother's brother. The gift to the latter was especially important, as he was the one who formally gave the woman, or as the Trumaí phrase it, "spreads her legs." Gifts were also given the girl, culminating with a present of fish. In the meantime the girl made an especially fine hammock which she gave to the groom.

If everything was accepted, the man was free to take the girl to his house. The wedding was preceded by a fishing expedition in which nearly all the men participated, and by a wrestling match for which the groom was beautifully painted. The women held a trade game. The actual ceremony consisted of nothing more than the woman's moving into the house of her mate. A male relative carried her hammock to his home.

This was the way weddings should have been conducted in the Trumaí village. Actually, they were even less formal, especially in the case of second wives in polygamous unions. Marriage and sex preoccupied the Trumaí, for there were not enough women to go around; but even the few formal acts involved interested the Trumaí little. If the marriage was durable, the couple settled down and had children. After marriage and the birth of children no great change occurred in their positions in the community until they reached old age.

Old Age

Everyone in the village was classified as "younger" or "older." The men were either *axoeek* (younger) or *idakek* (older), while the terms for the women were, respectively, *axoekisa* and *idakits*. These were not age

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105 182 648 in the Trumaí community, for, as Oberg notes, no adult male would choose to live with a people of such low status.[1]

105 162 It might be expected that the Trumaí could have compensated for this drain by raising their birth rate. However, in this population of 43 persons, there were only ten children, an extremely small number when the low average life span is considered. Furthermore, only two of the children were females. Of the approximately twelve women who 105 were capable of bearing children, only one was pregnant, and the others 163 were urging her to abort her child. Thus, infanticide and abortion were 161 taking a heavy toll in the Trumaí village.

847 845 The custom of killing twins and of spacing births three or four years apart are reported by Oberg for the Kamayurá,[2] and these factors may well have been present in the Trumaí situation. The long post-natal [171] taboo on sexual intercourse had the same effect. Wagley, who studied the dying but equally unacculturated Tapirapé, found that traditional practices were contributing to the complete depopulation of that group also.[3]

105 161 178 154 But among the Trumaí there is still another and less tangible dimension. Abortion may have been urged on a pregnant woman because she had no husband, but how is one to explain the killing of two of Aloari's children without his consent, or the fact that there were eight male and only two female children in the community? The limited information available suggests that the Trumaí were purposely restricting their number and committing suicide, perhaps unintentionally, in the process. Two reasons for this extreme behavior may be hypothesized: first, the impasse in which the Trumaí found themselves because of the steady depopulation made them so personally insecure and apathetic regarding both the present and the future that they were no longer willing to rear sizable families, despite their evident devotion to children; and second, they may not have thought it possible to produce the surplus necessary to support such families. Actually, however, even with their diminished numbers the Trumaí could have increased their food supply.

105 511 433 ●226 Their lowered standard of living was due to more than attitudes. Loss of population no doubt also decreased the yield of Trumaí fishing and therefore limited their chief source of protein. To be sure, bow and arrow fishing was little affected, but fish poisoning, the only communal subsistence technique practiced by them, was much less effective when employed by a small group, for a few people can adequately poison only smaller watercourses and branches of lagoons, while a greater number can cover larger streams and whole lagoons. In the latter circumstance, both the take would be larger and larger species would be available. Moreover, when the waters are heavily poisoned and enough people are present to reap the "harvest," there is less chance of fish escaping. Thus, up to

[1] Oberg 1953, p. 15. [2] *Ibid.*, p. 62. [3] Wagley 1940.

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a certain point at least, the take increases geometrically with the number of persons participating.

In gardening, also, which was not practiced collectively, their small number decreased Trumaí security. It was common for nearly all the village men to plant their gardens in clearings adjacent to those of their neighbors. Obviously, if one part of such a single, extended clearing was improperly fired, or if the crops were destroyed by armadillos or wild pigs, the whole village might be without food. Crop failure for a variety of causes is common in the tropical forests, but most aboriginal communities in South America have several separated garden clearings, each owned by an individual or extended family. If one garden fails, the family can, in a period of emergency, reap from others. Oberg relates that the Trumaí once had to turn for food to the Kamayura,[4] perhaps because of the failure of the village clearing.

It is, of course, possible that in the past the Trumaí organized their gardens along the more rational lines of the Kamayurá;[5] and it is also possible that they never made a proper ecological adaptation subsequent to their arrival in the upper Xingú region. But lacking information on their economy prior to their decimation, we cannot make any firm statement on these points. However, it is certain that, despite their small numbers, the individual Trumaí could have cleared and planted much more land. The average size of the gardens observed by Quain was one-half acre, and this area had to feed up to four people. Many men also had old gardens which were planted only to manioc. According to Quain's calculations, the total acreage of Trumaí gardens was only a little over thirteen. Since yields from forest soils are not high, it is evident that this very small area must have barely met the needs of a population of 43 persons. Manifestly, the Trumaí did not work hard enough; and it seems evident that their lack of application did more to impoverish them than any other single factor.

If the other upper Xingú tribes are used as criteria to establish what Trumaí society was like before its decline, some very serious dysfunctions within Trumaí social structure soon become apparent. To be sure, such a comparison is an arbitrary procedure; and it is only invoked here for its heuristic value. Since village and house patrilocality is the usual mode of residence among the Trumaí, a household similar to that of the Kamayurá, and with like functions, might be expected and might indeed have existed in the past. However, the Trumaí death rate in 1938 was so high that these units disintegrated before they had gone beyond the embryonic stage. House membership was shifting, the number of persons involved small, and leadership nebulous. And since kinship was the principal mechanism for structuring interpersonal relationships in Trumaí society, this lack of a stable, kin-structured unit probably did

[4] Oberg 1953, p. 42. [5] *Ibid.*, p. 45.